We claim:

1. An isolated shrew paralytic peptide having a molecular weight of about 6000 Da as measured by SDS- PAGE.

2. An isolated peptide having the amino acid sequence:

(a) DCSQDCAACS ILARPAELNT ETCILECAGK LSSNDTEGGL CKEFLHPSKV DLPR (SEQ ID NO:1); or

(b) DCSQDCAACS ILARPAELNT ETCILECEGK LSSNDTEGGL CKEFLHPSKV DLPR (SEQ ID NO:2).

3. The peptide of claims 1 or 2, which includes at least one cysteine amino acid having a sulfhydryl group.

4. The peptide of claim 3, comprising at least two cysteine amino acids each having a sulfhydryl group and forming a disulfhydryl bond.

5. The peptide of claim 4, comprising six cysteine amino acids each having a sulfydryl group and forming three disulfhydryl bonds.

6. The peptide of claims 1 or 2, further having the property of absorbing light at 280 nm and stronger at 260 nm and including at least one aromatic amino acid.

7. The peptide of claims 1 or 2, isolated from a shrew submaxilary gland and/or shrew saliva.

8. The peptide of claim 7, wherein the shrew submaxillary gland is isolated from *Blarina brevicauda, Blarina carolinensis, Sorex unguiculatus, Sorex shinto saevu* (*Solenodon paradoxus*), *Neomys fodiens* or *Neomys anomalous.*

9. The peptide of claim 7, wherein i) a 10 microlitre dose of 20% (w/v) crude gland extract injected into a mealworm in an *in vitro* assay causes mealworm paralysis in less than 1 second; and ii) a 10 microlitre dose of 10% (w/v) crude gland

extract injected into a mealworm in an *in vitro* assay causes mealworm paralysis in less than 10 seconds.

10. The peptide of claims 1 or 2, in a purified form.

11. The peptide of claims 1 or 2, purified at least 90%, 95% or 99%.

12. An isolated peptide comprising a fragment of 5-10, 10-15, 15-20, or 20-24 amino acids of the peptide of claims 1 or 2.

13. A pharmaceutical composition or cosmetic composition including the peptide of any one of claims 1-12.

14. An isolated and purified multiprotein complex comprising the peptide of claims 1 or 2 and having a molecular weight of greater than or equal to 600,000 daltons.

15. A method of dissociating the peptide of claims 1 or 2 from the multiprotein complex of claim 14, comprising contacting the multiprotein complex with sodium docecylsulfate or aqueous alcohol or warming at 40°C.

16. The use of the peptide of claims 1 or 2 as a pharmaceutical substance.

17. The use of the peptide of claims 1 or 2 as a neuromuscular blocker.

18. The use of the peptide of claims 1 or 2 as an analgesic.

19. The use of the peptide of claims 1 or 2 for treatment of migraine, myofacial and other types of pain, muscle tremors, neuromuscular diseases, excessive sweating and wrinkles.

20. The use of the peptide of claims 1 or 2 for an analgesic for wounds.

21. The use of the peptide of claims 1 or 2 as an insect immobilizing agent.

22. A method of medical treatment of migraine, myofacial and other types of pain, muscle tremors, neuromuscular diseases, and excessive sweating in a mammal in

need thereof comprising administering to the mammal the pharmaceutical composition of claim 13.

23. A method of providing analgesia or neuromuscular blocking in a mammal comprising administering to the mammal the pharmaceutical composition of claim 13.

24. A method for analgesia of a wound in a mammal comprising administering to the mammal the pharmaceutical composition of claim 13.

25. A method of reducing wrinkles in a mammal comprising administering to the mammal the cosmetic composition of claim 13.

26. An antibody to the peptide of claims 1 or 2.

27. A method of determining the potency of a paralytic agent, comprising:

administering the paralytic agent to a mealworm or other insect;

determining the time until onset of paralysis and/or the duration of paralysis;

wherein the time for onset of paralysis is inversely proportional to the strength of the paralytic agent and the duration of paralysis is proportional to the strength of the paralytic agent.

28. A nucleic acid encoding the peptide of claims 1 or 2.